The Manchester Cancer Jaundice Pathway

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Introduction

Pancreatic cancer has the lowest 5 year survival of any cancer in Europe (see appendix 1). Most patients present with jaundice. Some of the reasons for such poor outcomes are delays in diagnosis and treatment. We believe that pancreatic cancer should be treated as an oncological emergency.

The Manchester Cancer Jaundice Pathway (see appendix 2) sits within the HPB Pathway board's strategy for improving outcome in HPB cancer. The MC Jaundice Pathway provides for earlier diagnosis as well as timely referral and improved pathways.

We were successful in obtain funding in 2015 to pilot this pathway from the Acceleration, Coordination and Evaluation (ACE) program, a collaboration between NHS England, Cancer Research UK and Macmillan Cancer Support.

The Problem

The problems with the existing system are threefold: lack of timeliness, poor patient experience and high complications rates.

A baseline audit of timeliness was undertaken. Among 422 patients with pancreatic cancer presenting to the HPB unit at North Manchester General Hospital between July 2007 and March 2014, time from Ultrasound (USS) or Computed Tomography (CT) to further investigation or treatment was as follows:

- USS to CT time 7 days (median) range (1-156)
- USS to endoscopic retrograde cholangiography (ERCP) time 10 days (median) range (1-189)
- USS to operation time 57 days (median) range (4-156)
- CT scan to surgery Median time 33 days (range 1 – 153)

The solution

The MC Jaundice Pathway provides for earlier diagnosis as well as timely referral and improved pathways. The key innovations are twofold:

1. Same day definitive radiological imaging for patients presenting with obstructive jaundice not due to gallstones (see Appendix 3). The purpose is to provide for earlier diagnosis and timely referral and to improve patient experience.
2. Fast-track referral for jaundiced patients with pancreatic cancer for early surgery. The aim is to reduce overall complications and prolong survival.

Results

1. One stop clinics

One stop jaundice clinics based on the Manchester Cancer Jaundice Pathway template have been established in Macclesfield Hospital, Pennine acute Trust and Central Manchester Foundation Trust.

Data from the pilot site at Macclesfield. There were 28 patients referred over 18 months; age 36-89yrs average 69.5 M: F= 4:3. 16/28 were discussed at HPB MDT; 12 had Clinic follow up. 100% had investigation /GI review within 2weeks; 96% had outcomes within 2 weeks. Final clinical diagnoses are described in table 1. The cancer pick-up rate was 25%.

Table 1. Diagnoses from the one stop jaundice clinic at Macclesfield

Causes of Jaundice		
Malignancies	Chalangiocarcinoma	2
	Pancreatic Tumour	2
	Gall Bladder tumour	1
	Duodenal Adenocarcinoma	1
	Metastatic Lung Carcinoma	1
Gall stone disease		9
Chronic liver diease		4
Hepatitis		2
Drug induced		2
Others		4

Data from other sites: The one stop jaundice clinic at PAT commenced on 8th March 2016. Of the first 9 clinic patients seen, there was a mean age: 70 yrs. (M5, F3). The waiting time between GP referral to clinic was mean 5.5 days (Range 1-7 days). All had relevant imaging on the same day. 2 had cancer 22%. The CMFT clinic commenced on 1 May 2016. Anticipated sites opening similar one stop jaundice clinics in 2016 are Stepping Hill Hospital and Salford Royal Infirmary.

2. Fast track surgery

Since 1 January 2016 to 1 October 2016, we have had 31 Referrals for Fast-Track Pancreatic Surgery 1 thought suitable for fast-track (same week) surgery, of which 15 proceeded. Reasons for not proceeding to surgery are outlined in Table 2.

Table 2. Outcomes of 31 referrals for fast track pancreatic surgery.

Proceeded to fast-track surgery	**15**
Stone disease	1
Bilirubin excessively elevated (>250)	3
Comorbidity preventing Fast track	4
Uncertainty of diagnosis	3
Advanced disease	3
Psychological well being	1
Failed to follow pathway	1

Outcomes for those who proceeded to surgery demonstrate quick times from presentation, ultrasound and CT to surgery (see Table 3). A comparison of median times from diagnostic investigation to surgery demonstrates that this has improved when comparing data from the pre-implementation audit to that post implementation. Time from ultrasound and CT scan to surgery has decreased from a median of 57 and 33 days pre-pathway to 13 and 9 days respectively post pathway.

Table 3. Fast track Surgery Results.

Patient (N= 15)	Time from presentation to surgery (days)	Bilirubin at time of referral (umol/L)	Time from USS to surgery (days)	Time from CT to Surgery (days)	Bilirubin at time of surgery (umol/L)	Time from referral to surgery (days)	Post op LOS (days)
Median	14	147	13	9	189	5	11.5
Range	8-50	57-219	3-41	3-40	50-310	1-13	7-61
Pre-Pathway			57	33			
Pre-Pathway			4-156	1-153			

3. Patient Experience

Patient experience has emerged as an outcome measure of equal importance to traditional operative outcomes of interest to surgeons. This view is emphasised by the NHS Five Year Forward View and the Report of the Independent Cancer Taskforce “Achieving World Class Cancer Outcomes – A Strategy for England 2015-2020”, which aims to boost cancer survival and transform patient experience. From the outset we set out to measure patient experience as an integral part of this project.

This was achieved using an online Survey Monkey™ questionnaire comprising as eries of 15 questions chosen from the NHS National Cancer Patient Experience Survey plus the NHS Friends & Family Test. Patient responses were overwhelmingly positive (Figs 1-4).

Figure 1. Q.6 Overall, how did you feel about the length of time you had to wait for your test to be done?

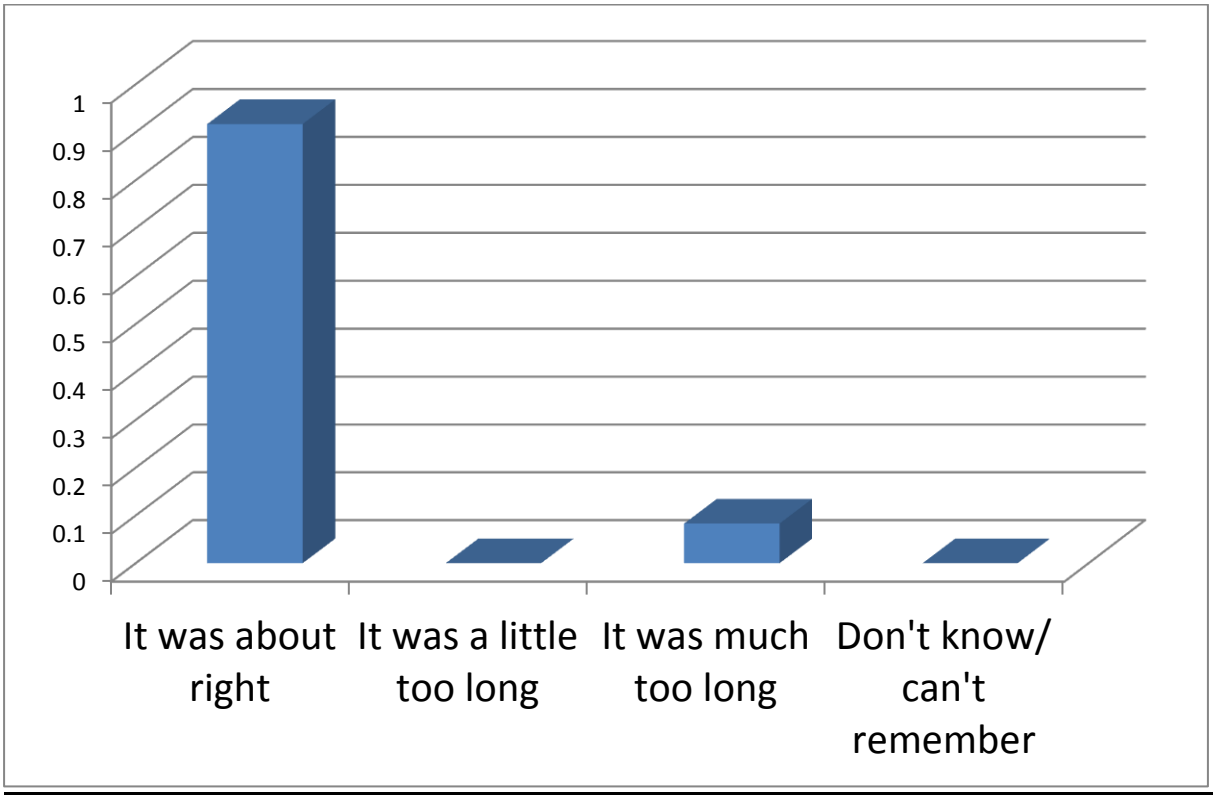


Figure 2. Q.8 Overall, how do you feel about the length of time you had to wait when attending clinics and appointments?

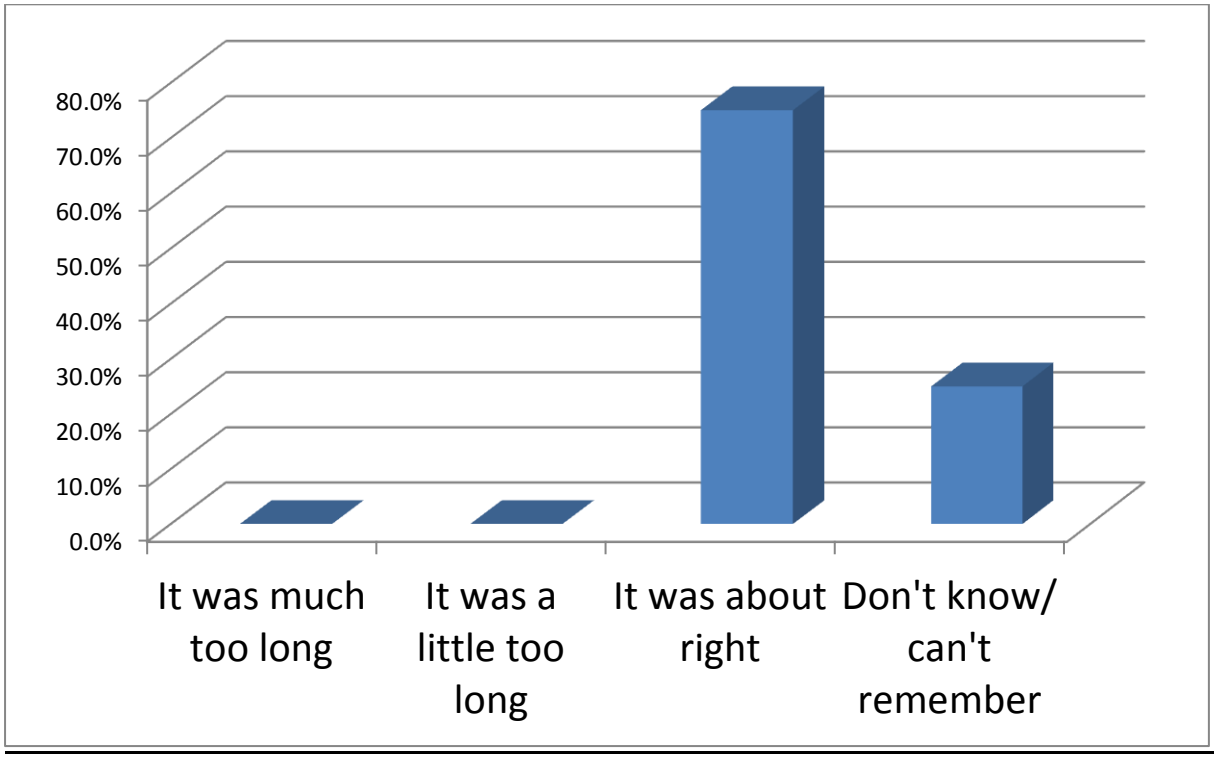


Figure 3. Q.10 Overall, how would you rate your care? (0 = Very Poor; 10 = Very Good)

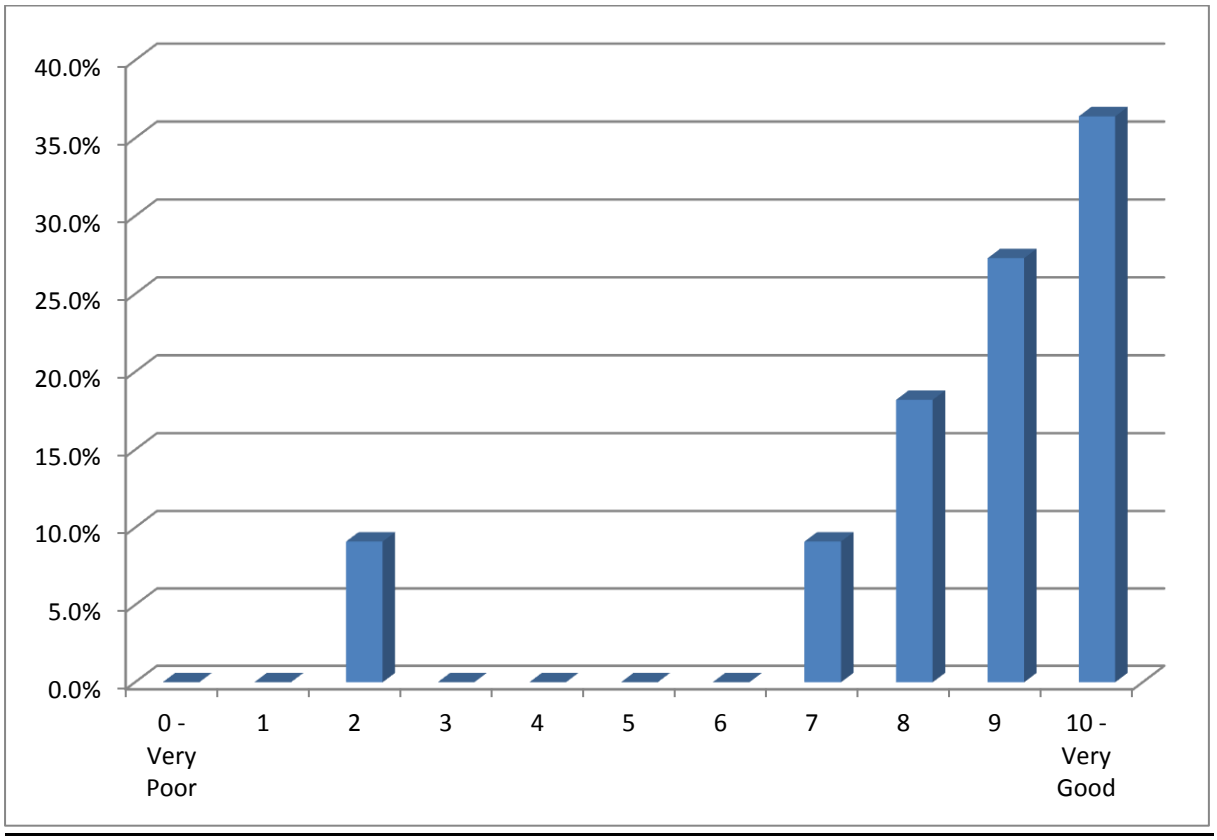
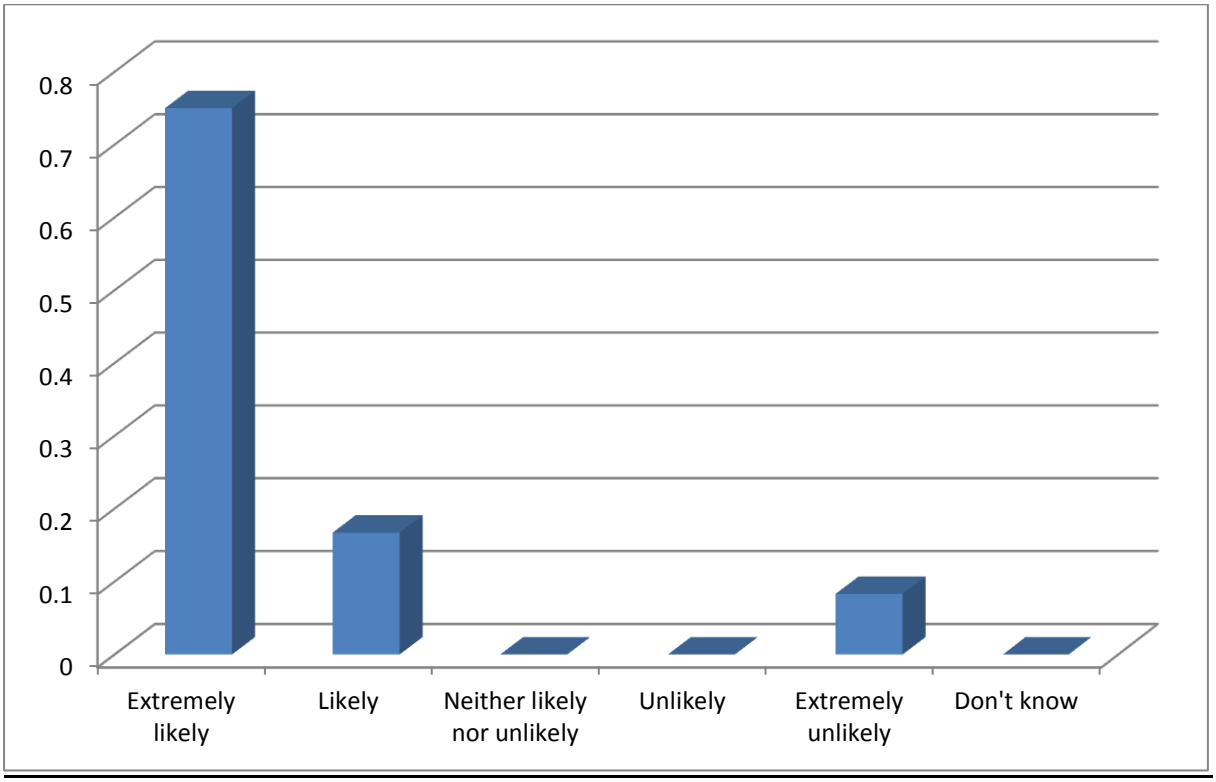


Figure 4. Q. 11 How likely are you to recommend our service to friends and family if they need similar care or treatment?



In addition, there was an opportunity for patients to provide feedback as free text. Typical responses included:

"….the waiting times and timescales for appointments and referrals and subsequent surgery had been fantastic and he could not have asked for better treatment."

"….over the moon with the care and treatment I received"

"….I could have paid privately but would not have got better care"

Conclusions

The Manchester Cancer HPB Board has identified that reducing delays in the diagnosis and treatment of patients with pancreatic cancer presenting with jaundice represents our best chance of improving outcomes in this disease.

We have successfully obtained funding from the ACE program to pilot this pathway across the region. Our grant of £68,000 has enabled us to employ a Regional Jaundice CNS and data coordinator, who facilitate the transfer and medical management of jaundiced patients from each referring trust to CMFT, as well as running a one-stop jaundice clinic.

One-stop jaundice clinics deliver same day imaging; have a high cancer pick up rate (22-25%) and facilitate timely diagnosis and treatment.

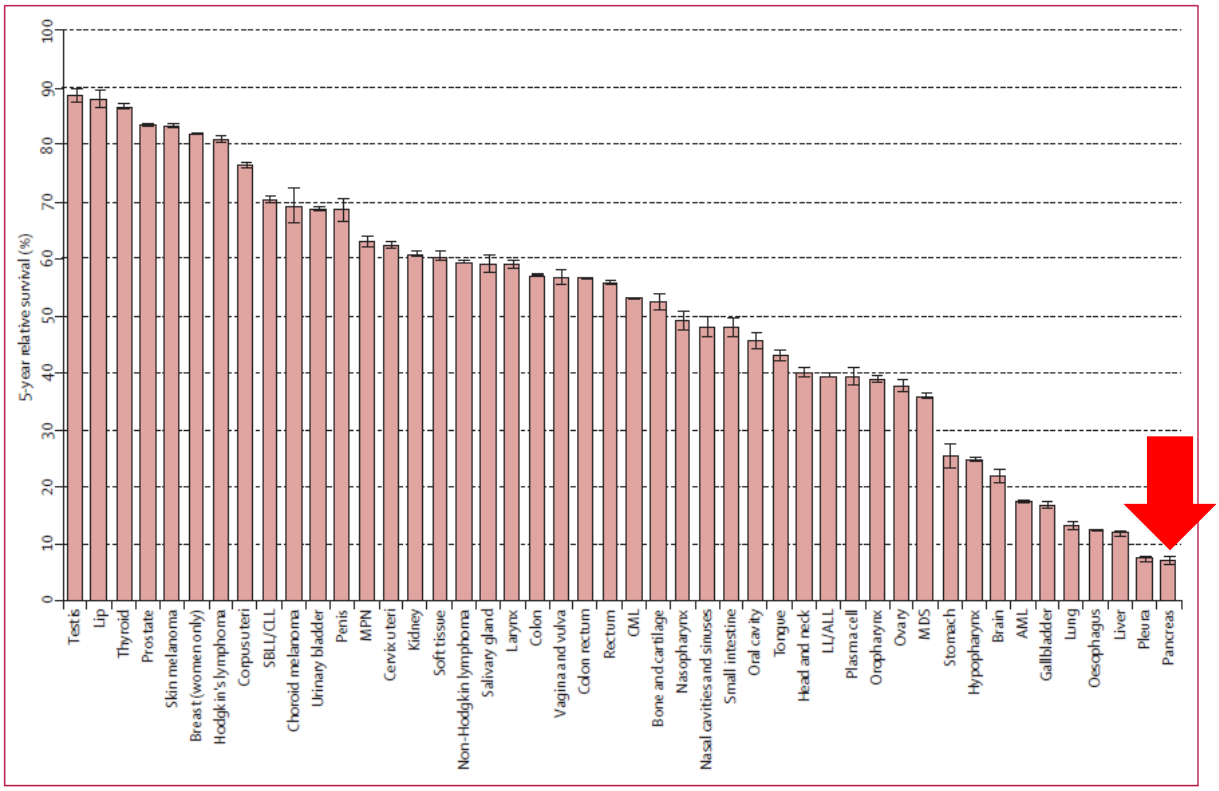
Fast track surgery for pancreatic cancer is feasible and safe and greatly reduces time to treatment.

Other metrics of success are being monitored, including patient satisfaction, morbidity and survival.

As the pilot phase of this ACE project comes to an end, we ask the GM Heads of Commissioning to continue funding this innovative pathway. This has the support of the Manchester Cancer Provider Board.

A failure to pursue these changes will reverse the recent hard won gains in transforming the thinking about patients with pancreatic cancer from a nihilistic one to a proactive treatment-orientated approach and eliminate the dramatically reduced waiting times to treatment for operable patients.

Appendix 1. Pancreas cancer has the lowest 5 year survival of any cancer in Europe



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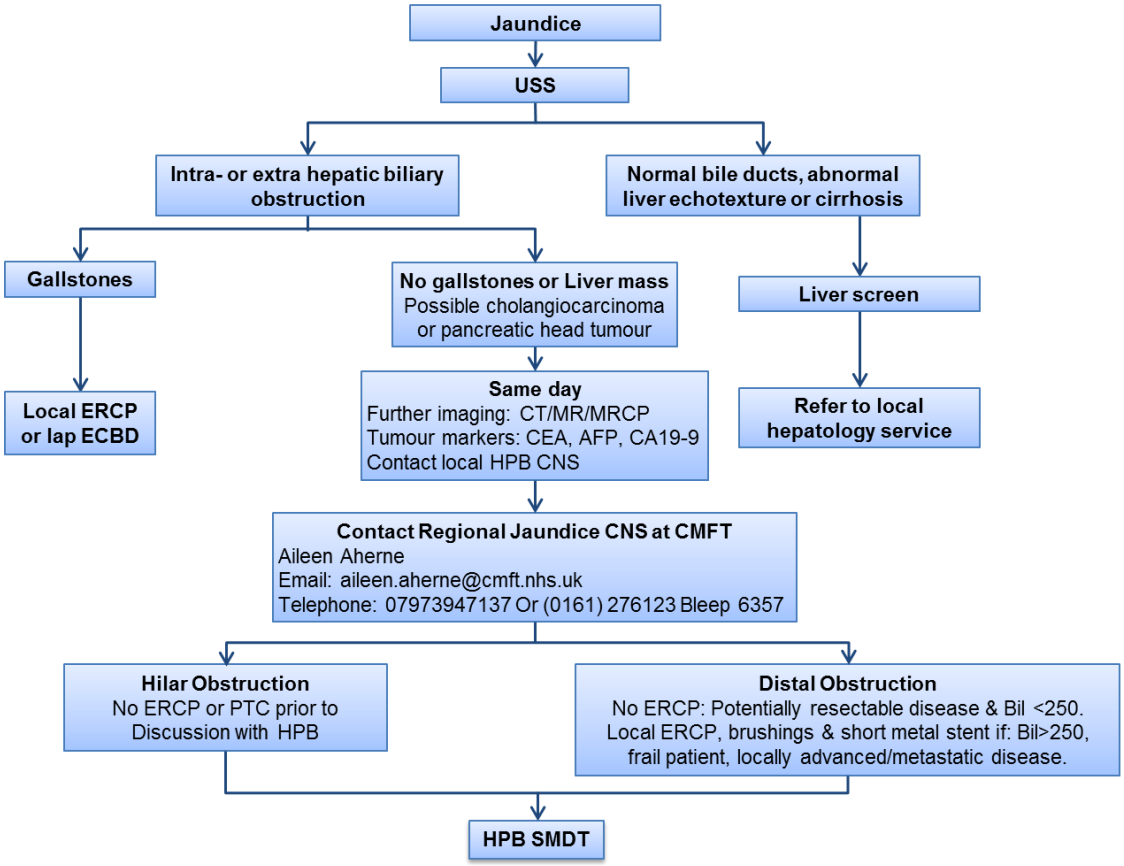
Source : De Angelis et al; Lancet Oncol 2014; 15: 23–34

Appendix 2. The Manchester Cancer Jaundice Pathway

Manchester Cancer

The Manchester Cancer Jaundice Pathway



Appendix 3. The CMFT One-Stop Jaundice Clinic.